



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8992/1
Permit Holder:	Mr Frances Sammut
Duration of Permit:	5 January 2021 – 5 January 2026

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of power line installation.

2. Land on which clearing is to be done

Cockleshell Gully Road reserve (Pin 11674876), Herron
Lot 10413 On Deposited Plan 206811, Herron
Lot 510 On Deposited Plan 29022, Herron

3. Area of Clearing

The Permit Holder must not clear more than 0.259 hectares of native vegetation within the areas cross-hatched yellow on attached Plan 8992/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

6. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III - RECORD KEEPING AND REPORTING

7. Record keeping

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (b) the date(s) that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 5 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 6 of this Permit.

8. Reporting

The Permit Holder must produce the records required under condition 7 of this Permit when required by the *CEO*.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

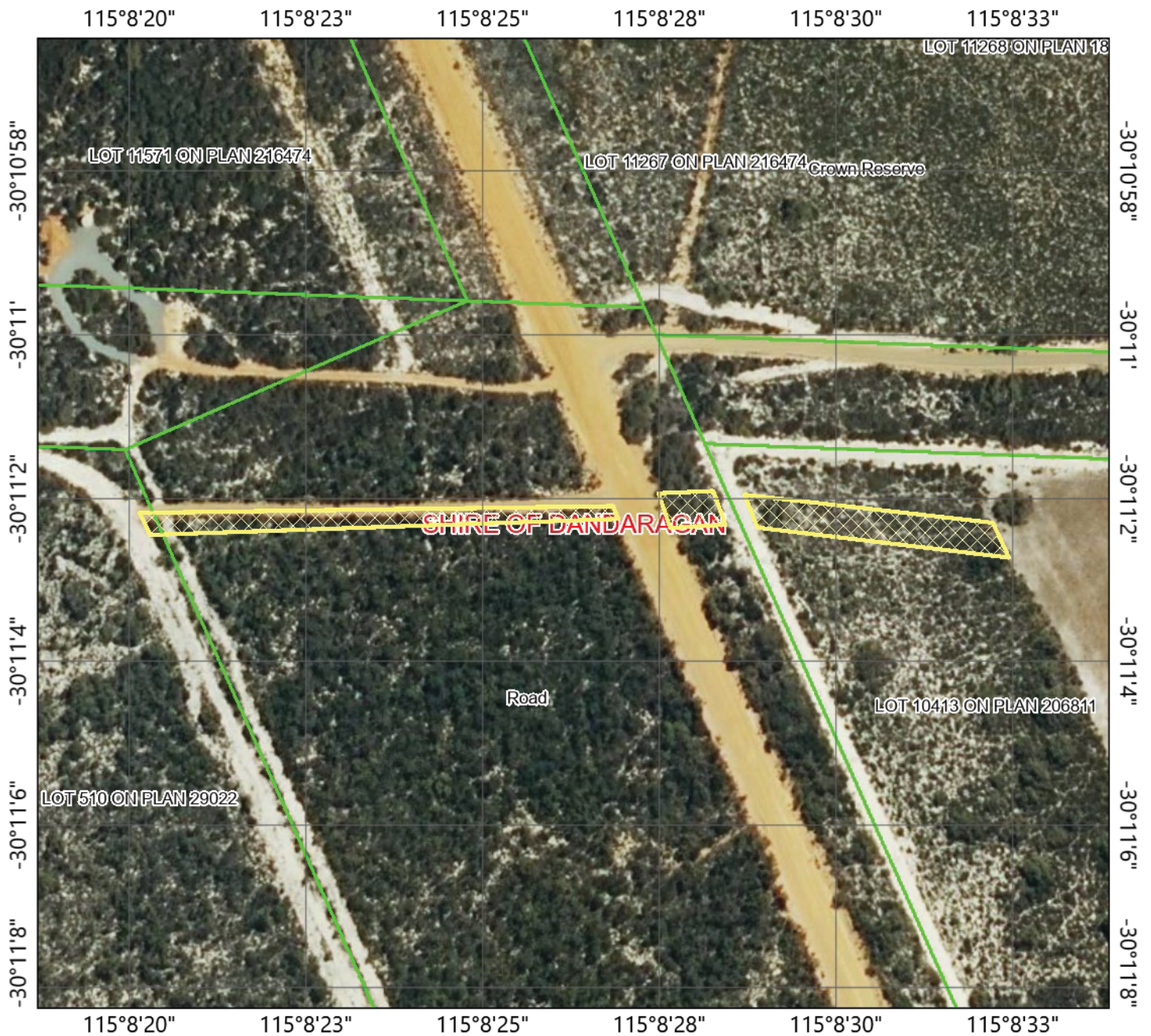


Meenu Vitarana
A/MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

11 December 2020

Plan 8992/1




Legend

- CPS areas approved to clear
- Local Government Authorities
- Land Tenure

0.1 0.03 0.1 Kilometers



WGS_1984_Web_Mercator_Auxiliary_Sphere


Meenu Vitarana
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Officer with delegated authority under Section 20 of the Environmental Protection Act 1986.

Disclaimer: This map is used as a generic static output for reference purposes. Information on this map may or may not be accurate, current, or otherwise reliable. While the Department of Water and Environmental Regulation has made all reasonable efforts to ensure the accuracy of this data, the department accepts no responsibility for any inaccuracies and persons relying on this data do so at their own risk.

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Locality Map



Government of Western Australia
Department of Water and Environmental Regulation



Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 8992/1
Permit type:	Purpose Permit
Applicant name:	Mr Frances Sammut
Application received:	3 August 2020
Application area:	0.259 hectares (ha) of native vegetation
Purpose of clearing:	Power line installation
Method of clearing:	Mechanical
Properties:	Lot 10413 On Deposited Plan 206811 Lot 510 On Deposited Plan 29022 Cockleshell Gully Road reserve (Pin 11674876), Herron
Location (LGA area/s):	Shire of Dandaragan
Localities (suburb/s):	Herron

1.2. Description of clearing activities

The application area comprises three linear strips of native vegetation totalling around 280 metres in length, each of which form part of a larger stand of native vegetation. The application area is bordered to the north by extensive remnant vegetation within conservation estate, including Lesueur National Park (see Figure 1, Section 1.5). The vegetation within the application area comprises woodland of *Eucalyptus tottiana*, *Banksia sp.*, and *Adenanthos cygnorum* in a good to excellent (Keighery, 1994) condition (Williams, 2020).

The applicant advised that the proposed clearing is required to install a power line as the property currently does not have access to power and the applicant plans on residing at the property.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	11 December 2020
Decision area:	0.259 hectares (ha) of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for public submissions and none were received.

In making this decision, the Delegated Officer had regard to:

- the site characteristics (see **Error! Reference source not found.**)
- relevant datasets (see Appendix **Error! Reference source not found.**)
- the findings of a flora survey (see **Error! Reference source not found.**)
- the clearing principles set out in Schedule 5 of the EP Act (see **Error! Reference source not found.**),
- relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).
- the purpose of the clearing to provide power to a proposed residence on the property

The assessment identified that the proposed clearing will result in:

- the loss of 0.259 hectares of native vegetation that is suitable foraging habitat for Carnaby's cockatoo
- the loss of 0.259 hectares of native vegetation considered representative of the Banksia Woodlands of the Swan Coastal Plain (Banksia Woodlands) threatened ecological community (TEC)
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values

After consideration of the available information, including the extent of surrounding higher quality native vegetation relative to the small linear application area, the Delegated Officer determined the proposed clearing is unlikely to have a significant impact on Carnaby's cockatoo habitat or the mapped extent of the Banksia Woodland TEC.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid and minimise measures to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback into surrounding remnant vegetation, including vegetation mapped as the Banksia Woodland TEC

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is not likely to lead to an unacceptable risk to the environment.

1.5. Site map

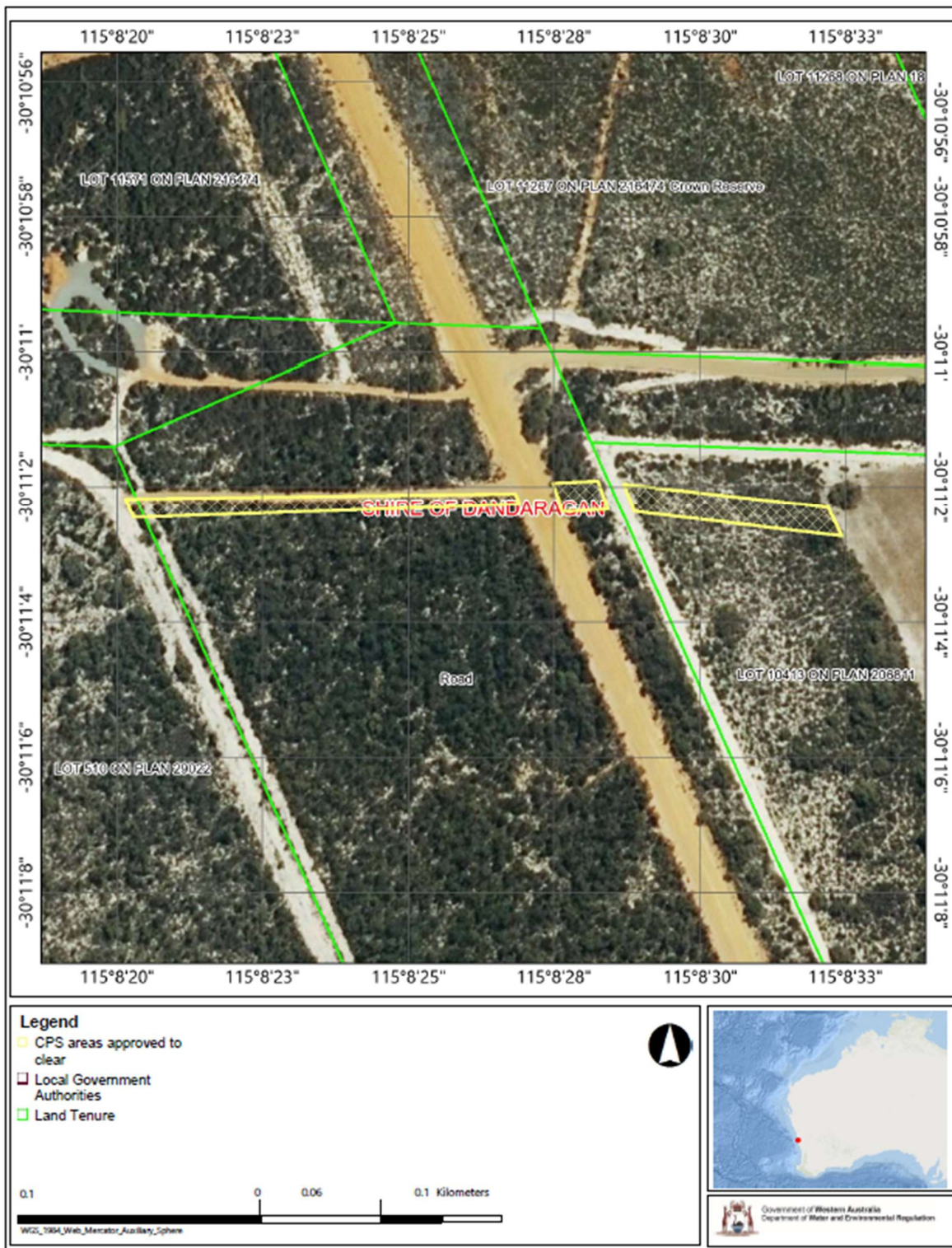


Figure 1. Map of the application area.

The areas cross-hatched yellow represent the areas authorised to be cleared.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

1. the precautionary principle;
2. the principle of intergenerational equity;
3. the principle of the conservation of biological diversity and ecological integrity; and

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant notes that there are no alternatives to installing the power line in the proposed location. However consideration was given to placing the power line as close as possible to an existing track in the longer eastern portion of the application area (180 metres in length), to limit impacts to higher quality vegetation not subject to current edge effects.

3.2. Assessment of environmental impacts

In assessing the application, the Delegated Officer had regard to the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (fauna, flora and ecological communities). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Environmental value: biological values (flora, fauna and ecological communities) – Clearing Principles (a), (b) and (c)

Assessment – Flora

A review of available databases indicates that the application area may contain three threatened (under the *Biodiversity Conservation Act 2016*) and 14 priority flora species (as listed by the Department of Biodiversity, Conservation and Attractions). This presumption is based on known records on similar landform types (to the application area) within the local area (10 kilometre radius). These species are shown below:

- *Paracaleana dixonii* (Threatened (T))
- *Hemiandra gardneri* (T)
- *Grevillea humifusa* (T)
- *Drosera pedicellaris* (Priority (P) P1)
- *Stylidium carnosum* subsp. *Narrow leaves* (J.A. Wege 490) (P1)
- *Acacia lasiocarpa* var. *lasiocarpa* Cockleshell Gully variant (E.A. Griffin 2039) (P1)
- *Amanita lesueurii* (P2)
- *Beyeria similis* (P2)
- *Dampiera* sp. Jurien (G. Lullfitz s.n. 10/7/1986) (P2)
- *Daviesia debilior* subsp. *debilior* (P2)
- *Ptilotus clivicola* (P2)
- *Scholtzia calcicola* (P2)
- *Thelymitra pulcherrima* (P2)
- *Acacia retrorsa* (P2)

- *Phlebocarya pilosissima* subsp. *teretifolia* (P2)
- *Thysanotus* sp. *Badgingarra* (E.A. Griffin 2511) (P2)
- *Thysanotus vernalis* (P3)

The applicant commissioned a targeted flora survey of the application area on 13 October 2020. The flora survey involved a botanist walking three parallel transects in each of the three portions of the application area, with an aim to cover the entire application area (Williams, 2020). The survey did not identify any threatened or priority flora species. It is considered that the survey was undertaken at an adequate time to identify the above species (Williams, 2020).

Given that the flora survey did not identify threatened or priority flora species, and noting the small linear application area, the proposed clearing is not likely to impact on any threatened or priority flora species.

Assessment - Fauna

The application area contains 0.259 ha of preferred foraging habitat for Carnaby's cockatoo, which is listed as endangered under the BC Act and EPBC Act. The application area does not contain any suitable breeding or roosting habitat for this species. The closest confirmed breeding site is 6.2 km north of the application area.

There is extensive vegetation surrounding the application area which provides foraging habitat value (based on broad scale vegetation mapping) for Carnaby's cockatoo. This includes 26,987 ha of native vegetation located in Lesueur National Park, located 80 metres north of the application area.

Noting the extent of suitable Carnaby's cockatoo foraging habitat within the surrounding area, small size of the proposed clearing and absence of suitable breeding or roosting habitat within the application area, the application area is not likely to comprise significant habitat for Carnaby's cockatoo.

Assessment - Ecological Communities

The westernmost portion of the linear application area (around 70m) is mapped as the Banksia Woodlands of the Swan Coastal Plain ecological community, which is federally listed as a threatened ecological community (TEC) and state listed as a priority ecological community (Priority 3). The entire application area is considered likely to be representative of this community.

The application area is adjacent to an extensive remnant of around 850 ha which is mapped as the Banksia Woodlands TEC. The application area represents 0.03 per cent of this adjacent community.

Noting the extent of the Banksia Woodlands community within the local area relative to the small linear application area, the proposed clearing is not likely to significantly impact on this community at a local or regional scale.

Conclusion

Based on the above assessments, the Delegated Officer has determined that the proposed clearing is not going to significantly impact on the above environmental values and no flora or fauna management conditions are required. The applicant will however be required to undertake weed and dieback management measures to reduce the risk of weed and dieback spreading into adjacent vegetation representative of the Banksia Woodlands TEC.

Conditions

To address the potential impact to adjacent native vegetation representative of the Banksia Woodlands TEC, the following condition is included on the permit:

- When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
 - clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
 - restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3.3. Relevant planning instruments and other matters

The application area is within the Shire of Dandaragan.

The Shire of Dandaragan (the Shire) provided a letter of authority to the applicant to undertake the works within Shire's road reserve and advised that "[the Shire] do not have an issue with [the applicant] clearing this area in order to have power installed by Western Power to the property, and are happy to approve this request on the condition that you meet all other legislative requirements in relation to obtaining a clearing permit for this purpose (Shire of Dandaragan, 2020).

There are no Aboriginal Sites of Significance mapped over the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Appendix A – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

1. Site characteristics

Site characteristic	Details
Local context	<p>The 0.259 ha application area comprises three linear strips of native vegetation totalling around 280 metres in length, each of which form part of a larger stand of native vegetation (see Figure 1, Section 1.5).</p> <p>The application is largely bordered by extensive native vegetation north, south and west and agricultural land east.</p> <p>Aerial imagery indicates the local area (10 km radius of the proposed clearing area) retains around 73% of the original native vegetation cover.</p>
Vegetation description	<p>The flora survey notes that the application area comprises woodland of <i>Eucalyptus tottiana</i>, <i>Banksia</i> sp., and <i>Adenanthos cygnorum</i> (Williams, 2020).</p> <p>Broadscale statewide vegetation association mapping indicates that the application area is mapped as:</p> <ul style="list-style-type: none">- Beard Vegetation Association (BVA) 1030, which is described as low woodland comprising <i>Banksia attenuata</i> and <i>Banksia menziesii</i> (comprises around 20% of the application area); and- BVA 1031, which is described as mosaic of shrublands with hakea scrub-heath /shrublands and dryandra heath (comprises around 80% of the application area). <p>The western portion of the application area is considered representative of BVA 1030 noting the dominance of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> in this area. The remainder of the application area is largely representative of BVA 1031.</p>
Vegetation condition	<p>The Survey indicates that the vegetation within the application area is in a good to excellent (Keighery, 1994) condition (Williams, 2020).</p> <p>The full Keighery condition rating scale is provided in Appendix C.</p> <p>Representative photos are available in Appendix C.</p>
Soil description	<p>The majority (90%) of the application area is mapped as Bassendean 1 Subsystem which is described as undulating to flat sandplain and minor swamps with pale to yellow deep sands (DPIRD, 2017).</p> <p>The remaining 10% of the application area is mapped as Yerramullah 3 Subsystem which is described as colluvial slopes and some plateau remnants, very gently to gently inclined hillslopes and sand filled minor valleys with pale and yellow deep</p>

Site characteristic	Details
	sands, pale sandy gravels, shallow gravel over duricrust, some sandy duplexes and sandy earths (DPIRD, 2017).
Waterbodies	No wetlands or watercourses occur within the application area. The closest is a wetland located 430m west which is described as a conservation category seasonally waterlogged paluslope, comprising Eucalyptus woodland. The closest watercourse to the application area is the Birriga Main Drain located 250m south west.
Conservation areas	The closest conservation area to the eastern portion of the application area is an unnamed nature reserve around 60m north. The closest conservation area to the western portion of the application area is Lesueur National Park located around 70m north.
Climate and landform	The region experiences a semi-arid to Mediterranean climate with annual rainfall of 600mm. Topographic contours indicate the application area lies on relatively flat topography.

2. Flora, fauna and ecosystem analysis

Threatened and priority ecological communities

Table 1. Closest mapped threatened and priority ecological communities.

Ecological Community	Distance of closest record to application area (kilometres)	Application area representative of the TEC/PEC
Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (State listed P3 and federally listed TEC – Endangered)	Mapped over around 70m of the western most extent of the application area	Yes

Conservation Significant Fauna

There are 16 records of conservation significant fauna in the local area. The application area is considered to provide preferred foraging habitat for Carnaby's cockatoo. The application area is unlikely to provide high value habitat for any other species shown below in Table 2:

Table 2: Conservation Significant Fauna in the local area.

Common Name	Scientific Name	Conservation Code
Wedge-tailed shearwater	<i>Ardenna pacifica</i>	Protected under international agreement (IA)
Ruddy turnstone	<i>Arenaria interpres</i>	IA
Sharp-tailed sandpiper	<i>Calidris acuminata</i>	IA
Sanderling	<i>Calidris alba</i>	IA
Red-necked stint	<i>Calidris ruficollis</i>	IA
Carnaby's cockatoo	<i>Calyptorhynchus latirostris</i>	Endangered
Gilled slender blue-tongue	<i>Cyclodomorphus branchialis</i>	Vulnerable (VU)
Mt Lesueur shield-backed trapdoor spider	<i>Idiosoma gardneri</i>	Priority (P) 2
Kwongan heath shield-backed trapdoor spider	<i>Idiosoma kwongan</i>	P1
Malleefowl	<i>Leipoa ocellata</i>	VU
Bar-tailed godwit	<i>Limosa lapponica</i>	IA

Ghost bat	<i>Macroderma gigas</i>	VU
Western brush wallaby	<i>Notamacropus irma</i>	P4
Grey plover	<i>Pluvialis squatarola</i>	IA
Crested tern	<i>Thalasseus bergii</i>	IA
Wood sandpiper	<i>Tringa glareola</i>	IA

Threatened and Priority Flora

There are no records of threatened or priority flora species within the application area. Several threatened and priority flora occur in the local area, and there is a reasonable likelihood that the following 17 species may occur within the application area based on the similarities shared between the habitat for these flora and the application area (Western Australian Herbarium, 1998-):

Table 1: Priority flora within the local area recorded on the same mapped soil type as the application area.

Species	Conservation Code
<i>Paracaleana dixonii</i>	Threatened (T)
<i>Hemiandra gardneri</i>	T
<i>Grevillea humifusa</i>	T
<i>Drosera pedicellaris</i>	P1
<i>Stylidium carnosum</i> subsp. <i>Narrow leaves</i> (J.A. Wege 490)	P1
<i>Acacia lasiocarpa</i> var. <i>lasiocarpa</i> Cockleshell Gully variant (E.A. Griffin 2039)	P1
<i>Amanita lesueurii</i>	P2
<i>Beyeria similis</i>	P2
<i>Dampiera</i> sp. Jurien (G. Lullfitz s.n. 10/7/1986)	P2
<i>Daviesia debilior</i> subsp. <i>debilior</i>	P2
<i>Ptilotus clivicola</i>	P2
<i>Scholtzia calcicola</i>	P2
<i>Thelymitra pulcherrima</i>	P2
<i>Phlebocarya pilosissima</i> subsp. <i>teretifolia</i>	P2
<i>Acacia retrorsa</i>	P2
<i>Thysanotus</i> sp. Badgingarra (E.A. Griffin 2511)	P2
<i>Thysanotus vernalis</i>	P3

The closest threatened or priority flora to the application area is *Hakea neurophylla* (Priority 4) located 1.7km north west. The application area does not provide suitable habitat for this species.

Appendix B – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p>Principle (a): <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p>The application area is representative of the Banksia Woodland TEC however is unlikely to comprise a high level of biological diversity noting the following:</p> <ul style="list-style-type: none"> it is unlikely to include threatened or priority flora it is unlikely to provide significant fauna habitat, or provide fauna linkage values it is surrounded by higher quality remnant native which has undergone lesser disturbance, and is unlikely to provide a high level of biodiversity relative to these surrounding remnants 	Not likely to be at variance	Yes - Refer to Section 3.2.1 above.
<p>Principle (b): <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p>The application area provides suitable habitat for Carnaby's cockatoo, however it is unlikely to provide significant habitat for this species based on the following:</p> <ul style="list-style-type: none"> it comprises thin linear strips largely adjacent to existing tracks, within a highly vegetated landscape that provides high value Carnaby's cockatoo habitat it does not contain breeding or roosting habitat for Carnaby's cockatoo 	Not likely to be at variance	Yes - Refer to Section 3.2.1 above.
<p>Principle (c): <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p>A flora survey undertaken at an appropriate time of year did not identify any threatened flora species. Therefore, the small linear application area is not likely to impact on threatened flora.</p>	Not likely to be at variance	Yes - Refer to Section 3.2.1 above.
<p>Principle (d): <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.”</i></p> <p>There are no state listed threatened ecological communities (TEC's) mapped within the application area. The application area is not considered to be representative of any known state listed TEC's.</p>	Not likely to be at variance	No
Environmental values: significant remnant vegetation and conservation areas		
<p>Principle (e): <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p>The local area retains around 73% native vegetation, and the mapped vegetation associations, BVA 1030 and 1031 retain 34% and 72% of their</p>	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
pre-European vegetation extents respectively. Given the above, the application area is not considered to occur within a highly cleared landscape.		
<p>Principle (h): <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."</i></p> <p>Noting that the application area does not provide any linkage values to the two closest conservation areas, and given that existing tracks and firebreaks exist between the application area and the nearby conservation area, the proposed clearing is not likely to impact on any conservation areas.</p> <p>There is a small risk of weeds and dieback spreading into these areas as a result of clearing, however weed and dieback management measures will minimise this risk.</p>	Not likely to be at variance	No
Environmental values: land and water resources		
<p>Principle (f): <i>"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."</i></p> <p>There are no watercourses or wetlands mapped within the application area, and the flora survey did not identify any riparian flora species. Therefore, the proposed clearing is unlikely to impact on riparian vegetation.</p>	Not likely to be at variance	No
<p>Principle (g): <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."</i></p> <p>Noting the size and linearity of the application area, the proposed clearing is not likely to result in appreciable land degradation.</p>	Not likely to be at variance	No
<p>Principle (i): <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."</i></p> <p>There are no watercourses or wetlands mapped within the application area, and impacts to surface water quality are unlikely.</p> <p>Given the topography and underlying marginal groundwater salinity, the proposed clearing is unlikely to cause deterioration in groundwater quality.</p>	Not likely to be at variance	No
<p>Principle (j): <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."</i></p> <p>Given the extent and linearity of proposed clearing, it is unlikely to cause flooding.</p>	Not likely to be at variance	No

Appendix C – Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Measuring Vegetation Condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very Good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D – Biological survey information excerpts / photographs of the vegetation





Figure 2-6. Photographs of the application area (Williams, 2020; Applicant, 2020).

Appendix E – References and databases

1. GIS datasets

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Aboriginal Heritage Places (DPLH-001)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Soil and Landscape Mapping – Best Available
- Hydrography

Restricted GIS Databases used:

- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities

2. References

Applicant (2020) Photographs of the application area. Additional information for Clearing Permit Application CPS 8992/1 (DWER Ref A1931345).

Department of Primary Industries and Regional Development (DPIRD) (2017). *NRInfo Digital Mapping*. Accessed at <https://maps.agric.wa.gov.au/nrm-info/> Accessed October 2020. Department of Primary Industries and Regional Development. Government of Western Australia.

Department of Water and Environmental Regulation (2019). *Native vegetation clearing permits Application, assessment, and management requirements under Part V Division 2 of the Environmental Protection Act 1986*. Department of Water and Environmental Regulation, Western Australia.

Department of Water and Environmental Regulation (DWER) (2014). *A guide to the assessment of applications to clear native vegetation Under Part V Division 2 of the Environmental Protection Act 1986*. Department of Water and Environmental Regulation, Western Australia.

Government of Western Australia. (2019). 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Shire of Dandaragan (2020) Letter of Authority for Applicant relating to Clearing Permit Application CPS 8992/1. 29 July 2020 (DWER Ref: A1919165).

Western Australian Herbarium (WAH) (1998-). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/> Accessed December 2020.

Williams, D. (2020) Flora Survey Report in support of application to clear native vegetation under the Environmental Protection Act 1986 (DWER Ref A1902277).